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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,824	03/22/2004	Tieyu Zheng	111079-135672	1482
25943	7590	04/18/2006	EXAMINER	
SCHWABE, WILLIAMSON & WYATT, P.C. PACWEST CENTER, SUITE 1900 1211 SW FIFTH AVENUE PORTLAND, OR 97204			GOLUB, MARCIA A	
			ART UNIT	PAPER NUMBER
			2828	

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/805,824

Applicant(s)

ZHENG, TIEYU

Examiner

Marcia A. Golub

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 13-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/23/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Stewart et al. (2003/0043868) hereinafter '868.

Regarding **claim 1**, Figs 1-4 of '868 discloses "an optoelectronic apparatus comprising:

a substrate having a stepped surface [102];

a thermal electric cooler [114] disposed on a lower portion of the stepped surface of the substrate;

and a laser light source [106] disposed on the thermal electric cooler [114]."

Regarding **claims 4, 5, 8, 10-12**, Figs 1-4 of '868 discloses "an optoelectronic apparatus as described above:

4. "wherein the substrate comprises a plurality of vias [holes for pins 104] to facilitate routing of electrical connections to the thermal electric cooler [114].

5. "wherein the thermal electric cooler [114] comprises a T-shaped bottom portion (elements 114 and 118 form a T-shape, Fig 4) ;

8. "wherein the laser light source [106] comprises a selected one of a vertical cavity surface-emitting laser device, a Fabry-Perot laser device, a distributed feedback laser device, and a laser diode device; (paragraph 0024)

10. "wherein the apparatus further comprises an overhanged welding ring [102] disposed around the substrate;

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11. "wherein the apparatus further comprises a cap [301] with an optical window [304] to cover the laser light source [106] and the thermal electric cooler.
12. "wherein the optical window [304] comprises a flat glass window (paragraph 0032)

Regarding **claim 1**, Figs 1-4 of '868 discloses "an optoelectronic apparatus comprising:

- a substrate having a stepped surface [112];
- a thermal electric cooler [114] disposed on a lower portion of the stepped surface of the substrate;
- and a laser light source [106] disposed on the thermal electric cooler."

Regarding **claims 2, 3, 6**, Figs 1-4 of '868 discloses an optoelectronic apparatus as described above:

- 2, 3. "wherein the substrate [112] comprises a ceramic material [BeO] (paragraph 0027);
6. "wherein the apparatus further comprises a driver disposed on an upper portion of the stepped surface of the substrate [112], and coupled to the laser light source [106] (laser submount 108 positioned on top of 112 incorporates a signal conditioning circuit for the laser) (paragraph 0023);

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Acklin et al. (6,778,576) hereinafter '576.

Regarding **claims 1, 2 and 9**, Fig 1 of '576 discloses "an optoelectronic apparatus comprising:
a ceramic substrate [2] having a stepped surface;
a thermal electric cooler [25] disposed on a lower portion [24] of the stepped surface of the substrate;
and a laser light source [5] disposed on the thermal electric cooler,
wherein the apparatus further comprises a laser light steering mirror [17] subassembly disposed on the thermal electric cooler [25], adjacent to the laser light source [5]."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart as applied to claim 6 above.

Regarding **claim 7**, Figs 1-4 of '868 disclose an optoelectronic apparatus as described above, but do not disclose that "the ceramic substrate [112] comprises a plurality of vias to facilitate routing of electrical connections to the driver". However, '868 discloses vias [holes for pins 114] in the substrate [102].

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate vias for electrical connections into the ceramic substrate for at least the purpose of saving space inside the optical module.

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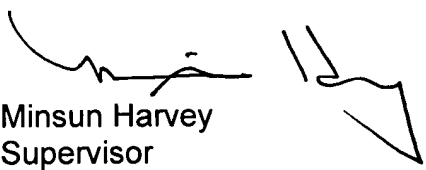
Contact Info

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcia A. Golub whose telephone number is 571-272-8602. The examiner can normally be reached on M-F 9-6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun Harvey can be reached on 571-272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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